Before the
FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON, DC 20554

In the Matter of	)	
	)	
Technology Transitions Policy Task Force Seeks Comment on Potential Trials	)	GN Docket No. 13-5
	)	

REPLY COMMENTS OF ALCATEL-LUCENT

Alcatel-Lucent submits these Reply Comments in response to the above-captioned request of the Technology Transitions Policy Task Force to support moving forward with real-world trials to facilitate the transition from TDM to all-IP networks.

I. THE IP TRANSITION IS WELL UNDERWAY, PROVIDING IMMENSE BENEFITS TO CONSUMERS

Alcatel-Lucent is the trusted transformation partner of communications service providers, enterprises, and strategic industries worldwide, providing solutions to deliver voice, data and video communications services to end-users. A leader in fixed, mobile and converged broadband networking, IP and optics technologies, applications and services, Alcatel-Lucent leverages the unrivaled technical and scientific expertise of Bell Labs, a leading innovator in the communications industry.

Alcatel-Lucent has been providing and maintaining telecommunications carriers' voice networks for more than 100 years with its industry leading digital Class 4/5 switching platforms, deployed in over 50% of U.S. carriers' traditional Public Switched Telephone Network (PSTN) footprint. Alcatel-Lucent is a major leader in fixed and wireless IP voice services, including:

- Digital Subscriber Line (DSL) and Fiber-to-the-Node (FTTN): One out of three broadband subscribers access the internet through Alcatel-Lucent DSL equipment; over 90 VDSL2 (the latest in DSL technology) deployments and trials.

- Fiber-To-The-Home (FTTH): 160+ deployments, including Gigabit Passive Optical Networking (GPON), Ethernet Passive Optical Networking (EPON), and Point-to-Point (P2P) fiber technology.

- IP Multimedia Subsystem (IMS): 105 deployments globally; 64 active customer engagements with 43 supporting live traffic, including 5 in North America.

- Long Term Evolution (LTE): 33 deployments and over 40 trials, including in North America where three national carriers rely on Alcatel-Lucent LTE in their networks.

- Services: 50 million IMS subscriber licenses, 15 million Voice over LTE (VoLTE) licenses, and 7 million Rich Communication Services (RCS)-based Presence licenses.

Based on our experience as a leading supplier of TDM and IP voice platforms, Alcatel-Lucent is in a unique position to comment on and execute the transition from the legacy PSTN to an all-IP environment. Last year, Alcatel-Lucent saw IP extension shipments outperform TDM extensions by a wide margin as a consequence of key global IMS deployments. North America led the world in the transition to IP networks. These trends point to overwhelming consumer acceptance of broadband and IP services and the actions carriers are taking to meet the demand at both the access and service layers. Conversely, traditional TDM voice services have declined at rates as highs as 10% per year, leaving the installed base of Class 5 switch equipment operating at less than two-thirds of its initial engineered capacity. According to some estimates,[1] by the end of 2012 no more than one-third of households purchased traditional TDM switched voice service from Incumbent Local Exchange Carriers.

[1] *See*, e.g., Patrick Brogan, *New FCC Data Support USTelecom Non-Dominance Petition*, available at http://www.ustelecom.org/blog/new-fcc-data-support-ustelecom-non-dominance-petition (visited Aug. 7, 2013).

The ongoing transition from TDM to IP networks has been entirely market-driven, resulting from billions of dollars of investment by service providers to offer innovative services that their customers are choosing over legacy services. The IP transition empowers service providers to offer the triple play – high quality innovative voice, video, and data services – over a single connection and on a single bill. These services are made possible by robust investments in new access infrastructure, such as DSL and Fiber to the Node/Curb/Home (FTTx). At the same time, consumers are increasingly cutting the cord where voice service is concerned, relying entirely on wireless networks. As smart phones increasingly become the dominant mobile device in the market – powered by robust wireless networks and technologies, such as cutting edge, IP-based LTE – voice service cord cutting is only serving to expose ever greater numbers of consumers to an all-IP environment.[2]

In short, consumers are benefiting from carrier innovation and investment in the transition from TDM to IP – a transition already well underway, and largely without regulatory intervention. Yet, the Commission has a vital role to play now in moving the transition past the finish line to an all-IP market. Alcatel-Lucent therefore urges the Commission to take actions to facilitate the conclusion of the IP transition, including supporting carrier interest in conducting trials that can move us closer to all-IP networks.

II. THE COMMISSION SHOULD ENCOURAGE TRIALS THAT FACILITATE THE TRANSITION TO ALL-IP NETWORKS

Trials can be a valuable tool to facilitate the IP-transition, but should not be a prerequisite where a carrier can point to existing data from existing services or other sources. As

[2] Bell Labs, Network Planning, Performance and Economic Analysis Division, Mobile Data Traffic Indices, Feb. 10, 2012.

with any new product, a trial is the typical rite of passage to validate assumptions, measure outcomes and make process improvements. A trial execution of a Class 5 switch node retirement is just as vital as a new product introduction. A market trial will confirm migration methods that will allow for a controlled shut-down that minimizes or eliminates disruption to end users, while enabling the carriers to confirm assumptions (number of resources, time to execute, disposition of legacy features, etc.) required to perform a shut-down on a national level. A class 5 switch retirement trial is a key step in understanding the approach to a network-wide PSTN sunset program. Alcatel-Lucent urges the Commission to permit carriers to conduct trials that provide important information to facilitate the IP transition.

The purpose of IP trials should be to understand legacy regulatory requirements that no longer apply in an all-IP environment, or must be tailored to accommodate different technology as a means of ensuring consumer welfare. Through trials, carriers and regulators can learn about unexpected service gaps that may arise in migrating from TDM to IP. As AT&T emphasized in its initial comments in this proceeding, "trials would allow carriers to identify any operational issues posed by transitioning TDM customers to alternative services and to devise solutions that minimize the adverse impact of the transition on those customers."[3] AT&T further observed, "The trials would allow regulators to identify what federal and state consumer protections are important to retain in the transition period and beyond, and which are not."[4]

Certain regulations unique to TDM voice service may not result in any customer perception if eliminated in an IP-voice environment, yet legacy regulations may nevertheless inadvertently require TDM-specific functionalities to be inefficiently duplicated in an IP

[3] Comments of AT&T at 5.

[4] *Id.*.

environment. Federal and State regulations that retard the IP-transition in this manner (requirements for number of milliseconds of dial-tone delay after switchhook closure is one of many such real-world examples we have encountered) need to be revisited. Carriers should not be required to replicate the trappings of TDM service simply because "that's the way it has always been." Regulations that fail to be technology neutral threaten to forestall the IP-transition and should be subject to substantial scrutiny. Such regulations should either be removed as no longer relevant or revised to account for the all-IP environment.

As a final matter, Alcatel-Lucent cautions the Commission to not allow trials to delay the transition. There is widespread agreement that the IP transition is ongoing and offers great promise to consumers. With consumers across the country choosing in great numbers to migrate away from traditional TDM voice, carriers already have existing customer bases from which they can garner valuable data. In such cases, a service provider may determine it unnecessary, or even counter-productive, to create an IP transition trial market when real-world, market-driven conditions already provide the data a carrier needs. A trial should *not* be a prerequisite to moving forward, but rather an important option that carriers may choose to facilitate the IP transition within their service territory.

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III. CONCLUSION

For the foregoing reasons, Alcatel-Lucent urges the Commission to support conducting trials that will facilitate the transition to all-IP networks.

Respectfully submitted,

Alcatel-Lucent

/s/*Kevin Krufky*

Kevin Krufky, Vice President
Jeffrey Marks, Sr. Counsel – Director Regulatory Affairs

Public Affairs, Americas Region
1100 New York, Avenue, N.W.
Suite 705 West
Washington, D.C. 20005

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